In the claims:

All of the claims standing for examination are reproduced below.

1-11. (Canceled)

12. (Currently amended) A distributed processor packet router, comprising:

a plurality of communicating processors each supporting a plurality of external communication interfaces;

an APS server module ~~running~~ executing on a first one of the plurality of processors ~~for~~ managing communication and distributing configuration and state information regarding groupings of communication interfaces; and

APS client modules ~~running~~ executing on ~~second ones~~ all others of the multiple processors, the APS client modules ~~for~~ monitoring interface state information, reporting to the APS server module, and ~~for~~ negotiating with other APS client modules;

characterized in that ~~all of the APS software dependent data resides locally in APS software of each individual APS module, and further characterized in that APS interface relocation from a primary interface to a backup interface is performed through direct communication, via said software, between the APS client modules running on the processors supporting the involved interfaces, and all of the required communication between distributed APS client modules are completed to perform a switchover within a 50 millisecond time window required by APS protocol, and wherein the primary and backup processors comprise the same processor~~ the APS server module keeps all client modules current with the configuration and state information, such that in a failure of an interface, switching to a backup is accomplished by a client module in a minimum time, because all necessary configuration and state information regarding groupings of communication interfaces is locally accessible.

13. (Currently amended) The distributed processor packet router of claim 12 wherein the data-packet-network is the Internet network

14. (Currently amended) The distributed processor packet router of claim 13 wherein the ~~plurality of primary router~~ groupings of communication interfaces comprise an APS grouping of interfaces connected to a SONET network.

15. (Currently amended) The distributed processor packet router of claim 12 wherein the APS software suite includes a server application, a server-client application, and a client module.

16. (Currently amended) The distributed processor packet router of claim 15 wherein the server application runs on a control card, and the server-client application as well as the client module run on a line card.

17. (Currently amended) The distributed processor packet router of claim 12 wherein indication of an event is an APS signal received through the target interface on the backup ~~processor~~.

18. (Currently amended) The distributed processor packet router of claim 17 wherein the received APS signal indicates one of failure or severe degradation of the target interface.

19. (Currently amended) The distributed processor packet router of claim 17 wherein the received APS signal indicates an administrative request for interface relocation.

20. (Currently amended) The distributed processor packet router of claim 12 wherein configuration and state information generic to a targeted interface for relocation is mirrored to the backup router interface for the purpose of initializing and activating the backup interface to function as the primary interface.

21. (Currently amended) The distributed processor packet router of claim 12 wherein the distributed processors communicate with each other through a network of fabric cards implemented within the router.

22. (Currently amended) The distributed processor packet router of claim 12 wherein all communication exchanges between the distributed APS components follow a message sequence scheme wherein each request and response has a sequence number.

23. (Cancelled)

24. (Currently amended) A method for relocating a primary router interface to a designated backup router interface using an APS module suite distributed over multiple communicating processors of a distributed processor packet data router comprising steps of:

(a) providing a plurality of communicating processors each supporting a plurality of external communication interfaces and each including an APS client module;

(b) executing an APS server module on a first one of the plurality of the communicating processors managing communication and distributing configuration and state information regarding groupings of the external communication interfaces to the balance of the communicating processors;

[[(a)]] (c) mirroring all current configuration and state information, from the APS server module to the plurality of communicating processors required to perform switchover to at least one backup interface of the groupings of interfaces according to APS protocol, ~~of the primary router interface to the processor supporting the designated backup router interface~~;

[[(b)]] (d) receiving indication of a requirement to initiate an APS switchover from the primary router interface to the at least one backup interface;

[[(c)]] (e) determining if [[the]] the at least one backup router interface is available from the plurality of external communication interfaces;

[[(d)]] (f) activating the ~~designated~~ backup interface using the mirrored configuration and state information, and

[[(e)]] (g) completing steps [[(a)]] (c) through [[(d)]] (f) within a 50 millisecond time window required by APS protocol to perform a switchover;

wherein all software data required to perform steps [[(a)]] (c) through [[(e)]] (g) is distributed locally in software of each individual APS module~~, and wherein the plurality of primary interfaces comprise an APS grouping of interfaces connected to a SONET network, and the APS grouping of interfaces is physically supported on one processor~~.

25. (Currently amended) The method of claim 24, comprising an additional step [[(f)]] for reporting any changed route results to a task manager responsible for distributing updated route tables to the processors.

26. (Original) The method of claim 25, comprising an additional step for updating a forwarding data base according to a switchover made.

27. (Original) The method of claim 24 wherein the distributed processor data router is connected to and operating on a data-packet-network at the time of interface relocation.

28. (Original) The method of claim 27 wherein the data-packet-network is the Internet network.

29. (Currently amended) The method of claim 24 when the primary router interface ~~is a part of a~~ and the ~~group~~ groupings of interfaces are connected to a SONET network.

30. (Currently amended) The method of claim 24 wherein in step [[(b)]] (d) the indication is received at the primary interface.

31. (Currently amended) The method of claim 24 wherein, in step [[(b)]] (d) the indication is received at the backup interface.

32. (Currently amended) The method of claim 24 wherein in step [[(b)]] (d) the indication is of the form of an administrative request.

33. (Currently amended) The method of claim 24 wherein in step [[(c)]] (c) determination of availability of the backup interface partly depends on a priority state of the primary router interface requiring backup.

34. (Currently amended) The method of claim 24 wherein in step [[(c)]] (c) the backup interface is physically located on a processor separate from that of the primary router interface.

35. (Currently amended) The method of claim 24 wherein in step [[(a)]] (c) the configuration and state information is selected from a table of such sets of information stored on the processor hosting the backup router interface.